TENNESSEE'S TEN MOST COMMON MYTHS ABOUT FORESTRY & WILDLIFE MANAGEMENT

Myths Are Worse Than Just Not Knowing

Tennessee is blessed with diverse forests that support a variety of wildlife and produce a variety of wood products. Forest landowners, with the help of foresters, can improve wildlife habitat while improving their timber.

Here are the most common misunderstandings about forest and wildlife habitat management, and reasons why timber production and wildlife are compatible.

Myth #1: Cutting Only Big Trees Gives Younger Trees Room to Grow and Become More Valuable

Many people think that the best way to harvest timber is to cut the big trees and let the little trees grow. This assumes that small trees are young and big trees are older. But in many cases large trees and smaller midstory trees are about the same age. The larger trees grew faster.

Cutting the largest and best trees is called “diameter limit cutting” or “high grading”. High grading takes the most valuable trees and leaves the less valuable – slow growers, crooked, rotten, less desirable species, etc. – to compose the future forest. This is like a dairy farmer selling his best milk producers and keeping the inferior cows for breeding and milking.

The preferred alternative to high grading is often to harvest all the trees. This benefits wildlife immediately by producing browse, insects and hiding cover and in the long term provides heavy mast (nuts, acorns, etc.) yields from maturing trees. It also benefits future timber production by providing the full sunlight that many valuable timber species need and allowing the fastest growing trees to form the future stand.

Myth #2: Clearcutting Timber is Bad For Wildlife

Clearcutting is the cutting of all trees on an area of more than one acre. It is a valuable technique for both timber and wildlife management.

Clearcutting benefits timber production by allowing the reproduction and growth of a wide variety of species, including those that demand full sun, such as yellow-poplar, oak, walnut, and ash. This is important, since these shade-intolerant species are some of the most valuable and fastest growing. Their reproduction is not possible using partial cutting methods alone. Clearcutting eliminates low quality and slow-growing trees that interfere with the regeneration of shade-intolerant species.

Clearcutting benefits wildlife by providing plentiful browse and cover. It also increases habitat diversity and edge, a valuable habitat component for many species, by providing young forest next to older forest.

The optimum size of a clearcut for wildlife depends on the species being considered and the shape of the clearcut. A general rule of thumb for many species is 10 to 25 acres. Larger areas are underutilized by wildlife, because they tend to roam no more than a few hundred feet away from the safety of nearby woods. Some species, such as the neotropical migrant prairie warbler and yellow-breasted chat, prefer very large clearcuts.

Large clearcuts are more efficient and economical to manage for timber production than many small clearcuts. Large clearcuts also minimize forest edge, where shade interferes with reproduction and growth of young trees, and where sunlight on the trunks of neighboring forest trees can cause undesirable growth of new branches that cause knots on the valuable first logs.

Myth #3: Clearcutting Harms Streams and Fish Habitat by Causing Erosion

Clearcutting is no more apt to cause erosion than selection cutting. Any method of timber harvest can cause erosion if done improperly. Erosion can be prevented by using simple guidelines called Best Management Practices, or BMPs. Virtually all erosion caused by timber harvest occurs where roads and skid trail cross or come too close to streams. This is easy to avoid using BMPs.

Most of the harvested area retains its protective litter layer and root mat, which prevent the soil from washing and filter out sediment that washes off roads and skid trails. Research has shown that if sufficient space is left between roads and streams, and if streams are crossed properly, little sediment will enter the stream as a result of timber harvest.

The potential for erosion is probably greater when conducting selection cutting than when clearcutting. More roads, landings and skid trails must be constructed over a larger area in order to remove the same volume as would be harvested from a smaller area of clearcut. And the cutting cycle is shorter for selection cutting, which requires more frequent reentry and disturbance.

Myth #4: Pine Forests are Biological Deserts and Offer Nothing for Wildlife

There is some truth to this myth. Even with the best management, a pine stand where seedlings are planted close together may lack diversity and food for 5 to 8 years. But this is only one stage in the life of a pine forest. Properly managed, other life stages of a pine plantation can be very beneficial to wildlife. A pine stand can add diversity to a hardwood forest and provide better shelter for wildlife than a hardwood stand. And during the first 5-6 years after planting, a wide assortment of grasses, forbs, and browse provides an abundance of food for wildlife. A wide variety of animals use young pine plantations, including deer, turkey, quail, hawks, and certain migratory songbirds.

Starting at age 15 to 18, a pine stand should be thinned every 5-10 years, both to increase timber yield and quality and to benefit wildlife. A lot of sunlight strikes the floor of a thinned pine forest, and this allows the growth of a variety and abundance of wildlife foods. Use of prescribed fire can also benefit wildlife by opening up the forest floor and allowing the growth of tender nutritious browse.

Pine plantations can provide good wildlife habitat for most of their lives, but to do so they must be managed, primarily through use of timely thinnings and prescribed fire.

Myth #5: Hardwoods are Always the Best Choice for Timber and Wildlife Production

Not all forest sites are highly productive for either timber or wildlife – over half, according to a US Forest Service estimate. Good sites produce fast-growing, tall, straight trees with few limbs, and lots of wildlife food. Poor sites, usually found on ridges and south and west slopes, produce slow-growing poor quality hardwood timber and much less wildlife food.

Pine can produce a fast growing, valuable crop on sites where hardwoods do poorly. Pines, if properly managed, are far from being a "wildlife desert" (see myth #4.) Pine growers in hilly country commonly grow pine on ridges and manage for hardwoods in the drainages, where the best sites are. This diversifies wildlife habitat and provides the best use of the land for profitable timber production.

Myth #6: Foresters are Converting all our Hardwood Forests to Pine

Planted pine acreage amounts to only 2.6% of the forest area in Tennessee, or about 400,000 acres out of a total of 14,400,000. The total acreage of pine plantation changed very little between 1989 and 1999 (the latest figures available.)

Myth #7: All Hardwoods are Good for Wildlife

Many hardwoods make excellent wildlife habitat, but some species are of little value. These include cottonwood, sycamore, sourwood, hornbeam and hophornbeam, bitternut hickory and, with some exceptions, elm, ash, maple and yellow-poplar.

Myth #8: If Plenty of Mast-Producing Oaks are Present, There is No Need to Provide Other Food for Wildlife

"Mast" is a collective term for the fruit of forest plants used by wildlife. "Hard mast" consists of nuts including acorns, walnuts, beechnuts, and hickory nuts. "Soft mast" includes dogwood berries, wild cherries, persimmons, maple seed and the soft fruits of many other species.

Many animals rely on acorns as one of their main food sources. But acorns are not available all year, and yields of acorns are sporadic. Animals must have other foods, such as browse for deer and insects and seeds for turkeys. These other food sources are just as important as acorns.

A variety of year-round food sources is most available in a diverse intensively managed forest. Every management activity affects wildlife and the food supply. Clearcut areas where timber is regenerated provide excellent year-round deer browse and forage. They also furnish fruit, seed, and insects needed by turkeys, quail, and many other birds. When such areas are interspersed among forested areas of varying age and size, they provide access to food and cover needed by practically all species of wildlife. Areas in which adequate food, cover, and water are provided

on a continuous basis will attract and retain wildlife indefinitely. Harvesting and regenerating oaks will assure a supply of oaks of seed bearing age (25 to 80 years) for the future.

Additional forest management practices that enhance wildlife habitat include periodic thinnings and prescribed burning, both of which give rise to nutritious browse growth, forbes, grasses, and seed bearing plants. Since all forest environments exist in a constant state of growth and change, harvest cuttings, thinnings, and prescribed burns must be conducted every few years to maintain habitat quality.

Myth #9: Fire is Bad for Wildlife

Prescribed fire can benefit wildlife, especially if combined with thinning. Research has shown that burning can result in more than a five-fold increase in available wildlife food. Prescribed fire used every 2-3 years on the forest floor will keep browse (brush and hardwood sprouts) within reach of deer and will stimulate the growth of nutritious forage plants. Quail and turkey also benefit because heavy brush is removed and seed-producing plants are encouraged to grow. Prescribed fire is not recommended in hardwoods if timber production is an objective because hardwoods lack the thick protective bark of pines.

Myth #10: Herbicides Harm Wildlife

The herbicides used in forestry today have low toxicities to humans and animals, most of them less than the same amount of table salt or aspirin. No carcinogenic effects have ever been shown from today's herbicides.

Most herbicides bind to soil particles and tend not to move. They break down very quickly. Most persist for only a few weeks or months. They are applied in extremely low volumes – only a few ounces or pounds per acre. And they are applied infrequently, only at the beginning of the planting/harvest cycle, which is only once every 20 years even in the most frequent cases.

The federal government has stringent requirements for applying herbicides. All herbicides must go through a testing and licensing process. They must be applied according to detailed instruction by trained and licensed applicators. As an extra safeguard, best management practices have been developed by the State for proper and safe application.

Prepared by the Tenn. Wildlife Resources Agency and the Tenn. Division of Forestry.